

# MATERIAL SAFETY DATA SHEET No. 214



## HAZARD CHARACTERISTICS

- |   |  |
|---|--|
| <input type="checkbox"/> Flammable      | <input type="checkbox"/> Combustible         |
| <input type="checkbox"/> Corrosive      | <input type="checkbox"/> Explosive           |
| <input type="checkbox"/> Water Reactive | <input type="checkbox"/> Radioactive         |
| <input type="checkbox"/> Oxidizer       | <input type="checkbox"/> Chemically Reactive |

### Toxic By:

- |  |
|--|
| <input type="checkbox"/> Ingestion             |
| <input checked="" type="checkbox"/> Inhalation |
| <input type="checkbox"/> Absorption            |

## PRODUCT

ALCOA WELDING WIRE  
MASSENA, NEW YORK  
Phone No 315/764-4733  
Date: 1981-12-09

## Section I. MATERIAL DESCRIPTION

Chemical Name & Formula:

Other Designation: Alcoa Almigweld (spooled electrode), Alcoa Altigweld (straight length welding rod), and Alcoa Coiled Welding Wire Alloys.

Corporate Stock No.:

Manufacturer: Alcoa

Section II. INGREDIENTS					Corp. Stock No.	HAZARD DATA
Alloy	%Al(min)	Copper	Magnesium	Silicon		
Concentration of all other elements which are greater than 1%						
1100	99.0	---	---	---	240-590	Total Welding Fume: 5 mg/m <sup>3</sup> (ACGIH TLV - 1980)
1199	99.99	---	---	---		
2319	91.8	5.9-6.6*	---	---		Ozone - 0.1 ppm (OSHA PEL) Above data applies to all alloys.
4145	83.0	3.3-4.7*	---	9.3-10.7		
4043	92.3	---	---	4.5-6.0	240-595	*Copper fume - 0.1 mg/m <sup>3</sup> (OSHA PEL)
4047	85.3	---	---	11.0-13.0		
5183	92.0	---	4.3-5.2	---	240-597	Applies to 2 alloys only 2319 & 4145
5356	92.0	---	4.5-5.5	---		
5554	92.0	---	4.7-5.0	---	240-598	
5556	92.0	---	4.7-5.5	---		
5654	92.0	---	3.1-3.9	---		

## Section III. PHYSICAL DATA

Physical Form: ..... Solid

Boiling Temp.:

Freeze-Melt Temp.: ..... 1065-1215°F (574-657°C)

Vapor Pressure:

Evaporation Rate:

Specific Gravity:

Density:

"Solubility in H<sub>2</sub>O":

Color: ..... Silvery

Odor: ..... None

## Section IV. FIRE AND EXPLOSION DATA

Flashpoint	Auto-Ignition Temp.	Flammability Limits in Air	Lower	Upper
------------	---------------------	----------------------------	-------	-------

Not applicable

## Section V. REACTIVITY DATA

This product is stable, without any serious incompatibilities. However, the ultraviolet light produced while welding will result in the formation of ozone.

Welding fumes cannot be classified simply. Their composition and quantity are dependent on the alloy being welded and on the process and electrodes used. Reliable analysis of fumes cannot be made without considering the nature of the welding process and system being examined. Reactive metals and alloys such as aluminum are welded in a protective, inert atmosphere, such as argon. These arcs create relatively little fume, but an intense ultraviolet radiation which produces ozone.

---

**Section VII. SPILL, LEAK & DISPOSAL PROCEDURES**

EPA Hazardous Waste No. NOT REGULATED

---

**Section VIII. SPECIAL PROTECTION INFORMATION**

Use with adequate ventilation, particularly when welding is being done in a confined space. Where respiratory protection is required, NIOSH approved respiratory protection should be used. The selection of the appropriate respiratory protection (fume respirator, supplied-air respirator, self-contained breathing apparatus, etc.) should be based on the actual or potential airborne contaminants and their concentrations present.

Refer to 29 CFR 1910.252 for regulations concerning eye protection, other personal protective equipment, and other safety precautions.

---

**Section IX. SPECIAL PRECAUTIONS & COMMENTS**

D.O.T. Requirements NOT REGULATED

---

**Section X. REFERENCES**

ASTM No.: —  
CAS No.: —  
CMA Chemical Safety Data Sheet No.:  
NFPA Guides  
NSC Data Sheets:  
Supplier Product Literature:

Other: ANSI Z49.1

Information herein is given in good faith as authoritative and valid; however, no warranty expressed or implied, can be made.